

Corn Pre-Applied Herbicide Considerations



DR. LARRY STECKEL

JACKSON, TENN.

Judging by phone calls over the last week it seems there is some uncertainty in which weed control program to go with in corn. This is understandable given the tight herbicide supply commonly reported. The biggest confusion though seems to be when one had planned on using a certain pre-mix and cannot get it what would be a good replacement? Confusion surrounding the corn premixes is nothing new. A famous extension weed scientist who passed away recently, Marshal McGlamery, coined the term “can ‘em and confuse ‘em” to describe the corn pre-mix phenomena decades ago. The reason there have been so many pre-mixes marketed in corn is due to the simple fact that all herbicides work better with atrazine. Typically, the first part of a corn pre-mix is atrazine which provides contact and residual control of most broadleaf weeds and some control of grassy weeds. The second component of a herbicide pre-mix for corn enhances the residual control of grass weeds and small-seeded broadleaves. Below are some thoughts on the more typical corn pre-mixes:

Bicep (Dual II Magnum + Atrazine) Rate: 1.6 to 2.6 qts/A

Positives

a. Has been used on more corn acres than any other corn pre-mix.

b. Provides good all around weed control with good crop safety.

Management Considerations

a. 2 qts/A rate provides 1.55 lbs ai of atrazine.

Harness Xtra 5.6, Degree Xtra, Breakfree ATZ (Acetochlor + Atrazine) Rate: 1.7 to 3 qts/A for Harness Xtra or 2.9-3.7 for Degree Xtra or 2.2 to 3 qts/A for Breakfree ATZ.

Positives

a. The non-encapsulated acetochlor formulations Harness and Breakfree have provided comparable pigweed and grass control to Dual II Magnum.

b. Degree Xtra is an encapsulated formulation that releases slowly over time. Limited research has shown about a week longer residual control of pigweeds than other acetochlor formulations.

Management Considerations

a. 2.1 qts/A rate of Harness Xtra provides 1.3 lbs ai of atrazine or 3.5 qts/A of Degree Xtra provides 1.17 lbs ai of atrazine or 2.5 qts/A of Breakfree provides 1.4 lbs ai of atrazine.

Lexar (Dual II Magnum + Callisto + Atrazine) Rate: 3 qts/A

Positives

a. Very good resistance management product with three modes of action for control of many broadleaf weeds.

b. All three herbicides can provide good glyphosate-resistant horseweed and Palmer amaranth control.

c. 3qts/A of Lexar will provide 5.4 ozs/A of Callisto and is the most economic way to buy Callisto.

Management Considerations

a. 3 qts/A rate of Lexar provides 1.31 lbs ai of atrazine.

Corvus (Balance + Thiencarbazone) Rate: 5.6 ozs/A

Positives

a. Balance will provide residual control of Palmer amaranth and horseweed.

b. Thiencarbazone will provide good residual control of many weeds particularly morning-glory species.

Management Considerations

a. Atrazine is needed for best control of Palmer pigweed.

Verdict (Outlook + Sharpen) Rate: 10 to 18 ozs/A

Positives

a. Will provide good residual of Palmer amaranth and grasses.

b. Allows flexibility. Acres maybe planted to soybean if the need arises.

Management Considerations

a. Corn and soybean may be planted after a Verdict application at rates of 5 to 10 ozs/A.

SureStart (Acetochlor + Python+ Stinger) Rate: 1.5 to 2.5 pts/A

Positives

a. We have limited research on this pre-mix. In last year's research it provide good residual of grasses and Palmer amaranth.

Management Considerations

a. 26 month plant back to cotton and 18 month plant back to tobacco

Regardless of herbicide pre-mix selected the best overall weed control will most often be achieved with some kind of two pass program. This is particularly true if the field and pre applied herbicide were applied just before the 4" of rain that came Thursday (4/11/13). One reason this works best is due to being able to apply more atrazine in two passes (2.5 lbs/A) compared to all in one application (2 lbs/A). A good approach is to either use Gramoxone Inteon or glyphosate mixed with 16 to 32 ozs/A of atrazine for burndown. Then follow early post emergence (up to 12" corn) with glyphosate plus atrazine or even better with one of the new post emergence pre-mixes like Halex GT or Capreno. Many folks do not realize that herbicides like Dual II Magnum, Harness, etc. can be applied post emergence to corn. They can and I often recommend this method as those residuals are there when most needed. Δ

DR. LARRY STECKEL: Extension Weed Specialist, University of Tennessee